



SAFETY HEALTH AND
ENVIRONMENTAL AFFAIRS

APR 1 1993

ORIGINAL

MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 7408 CHLORINE OXYGEN SCA

Emergency Telephone Number

Medical (708) 920-1510 (24 hours)

SECTION 1 PRODUCT IDENTIFICATION

TRADE NAME: NALCO 7408 CHLORINE OXYGEN SCA
DESCRIPTION: Aqueous sodium bisulfite solution

NFPA 704M/HMIS RATING: 1/1 HEALTH 0/0 FLAMMABILITY 0/0 REACTIVITY 0 OTHER
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 2 HAZARDOUS INGREDIENTS

Our hazard evaluation has identified the following chemical ingredient(s) as hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 14 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX. %
Sodium bisulfite	7631-90-5	40-70

SECTION 3 PRECAUTIONARY LABEL INFORMATION

CAUTION: May cause irritation to skin and eyes. Avoid contact with skin, eyes and clothing. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

SECTION 4 FIRST AID INFORMATION

EYES: Flush with water for 15 minutes. Call a physician.
SKIN: Wash thoroughly with soap and rinse with water. Call a physician.
INGESTION: Induce vomiting. Give water. Call a physician.
INHALATION: Remove to fresh air. Treat symptoms. Call a physician.

NOTE TO PHYSICIAN: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

SECTION 5 HEALTH EFFECTS INFORMATION

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin

EYE CONTACT: Can cause moderate irritation.
SKIN CONTACT: Can cause moderate irritation.



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SECTION 5 HEALTH EFFECTS INFORMATION

(CONTINUED)

INGESTION: Can be harmful.

SYMPTOMS OF EXPOSURE:

ACUTE: Irritation of nose, eyes, throat and upper respiratory tract is possible if sulfur dioxide gas is inhaled. Sulfur dioxide gas is formed when the product contacts strong acids.

AGGRAVATION OF EXISTING CONDITIONS: Persons with asthma or other respiratory problems should avoid exposure to the product.

SECTION 6 TOXICOLOGY INFORMATION

ACUTE TOXICITY STUDIES: Acute toxicity studies have not been conducted on this product, but acute studies have been conducted on a similar product. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS): $LD_{50} = 4.1$ g/kg

95% Confidence Limit = 3.6 - 4.7 g/kg

ACUTE DERMAL TOXICITY (ALBINO RABBITS): $LD_{50} = 3,038$ mg/kg

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):

SKIN IRRITATION INDEX DRAIZE RATING: 1.0/8.0 Mildly irritating

PRIMARY EYE IRRITATION TEST (ALBINO RABBITS):

EYE IRRITATION INDEX DRAIZE RATING: 9.4/110.0 Mildly irritating

OTHER TOXICITY RESULTS: Ingestion of sulfite can cause an allergic reaction in sensitive individuals. The resultant symptoms can include difficulty breathing, flushed skin and a rash.

SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Yellow	FORM: Liquid	ODOR: Pungent sulfurous
DENSITY:	11.4 lbs/gal.	
SOLUBILITY IN WATER:	Completely	
SPECIFIC GRAVITY:	1.37	ASTM D-1298
pH (at 1%) =	4.1	ASTM E-70
FLASH POINT:	None	
VAPOR PRESSURE:	32 (est) mm Hg @ 77 Degrees F	ASTM D-323
EVAPORATION RATE (Ether = 1):	Less than 1	ASTM D-1901



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SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

(CONTINUED)

NOTE: These physical properties are typical values for this product.

SECTION 8 FIRE AND EXPLOSION INFORMATION

FLASH POINT: None

EXTINGUISHING MEDIA: Not applicable

UNUSUAL FIRE AND EXPLOSION HAZARD: May evolve SO_x under fire conditions. Containers exposed in a fire should be cooled with water to prevent vapor pressure buildup leading to a rupture.

SECTION 9 REACTIVITY INFORMATION

INCOMPATIBILITY: Avoid contact with strong oxidizers (eg. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions and the release of toxic fumes.

Avoid contact with strong acids (eg. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) which can generate heat, splattering or boiling and the release of toxic fumes, specifically sulfur dioxide.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion SO_x may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

SECTION 10 PERSONAL PROTECTION EQUIPMENT

RESPIRATORY PROTECTION: Respiratory protection is not normally needed since the volatility and toxicity are low. If significant vapors, mists or aerosols are generated, wear a NIOSH approved or equivalent respirator.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a pressure-demand, self-contained breathing apparatus is recommended.

VENTILATION: General ventilation is recommended. Additionally, local exhaust ventilation is recommended where vapors, mists or aerosols may be released.

PROTECTIVE EQUIPMENT: Use impermeable gloves and chemical splash goggles when attaching feeding equipment or doing maintenance.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.



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SECTION 11 SPILL AND DISPOSAL INFORMATION

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR
TELEPHONE NUMBER (708-920-1510)

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 14.

Large liquid spills: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. Refer to CERCLA in Section 14.

For large indoor spills, evacuate employees and ventilate area. Those responsible for control and recovery should wear the protective equipment specified in Section 10.

DISPOSAL: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous liquid waste, it should be solidified with stabilizing agents (such as sand, fly ash, or cement) so that no free liquid remains before disposal to an industrial waste landfill. A non-hazardous liquid waste can also be deep-well injected in accordance with local, state, and federal regulations.

SECTION 12 ENVIRONMENTAL INFORMATION

AQUATIC DATA:

Results below are based on the product.

96 hour static acute LC_{50} to Rainbow Trout = Greater than 100 mg/L

Results below are based on a similar product.

96 hour static acute LC_{50} to Fathead Minnow = 382 mg/L

96 hour no observed effect concentration is 250 mg/L based on no mortality or abnormal effects.



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SECTION 12 ENVIRONMENTAL INFORMATION

(CONTINUED)

TOXICITY RATING: Slightly toxic

48 hour static acute LC₅₀ to Daphnia magna = 728 mg/L

48 hour no observed effect concentration is 250 mg/L based on no mortality or abnormal effects.

TOXICITY RATING: Slightly toxic

If released into the environment, see CERCLA in Section 14.

SECTION 13 TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME/HAZARD CODE - BISULFITES, INORGANIC, AQUEOUS
SOLUTIONS, N.O.S., 8, UN 2693, III
CONTAINS - SODIUM BISULFITE

SECTION 14 REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

OSHA'S HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:

Based on our hazard evaluation, the following ingredient in this product is hazardous and the reason is shown below.

Sodium bisulfite - Eye irritant, liberates SO₂ gas which is an irritant

Sodium bisulfite = TWA 5 mg/m³ ACGIH/TLV

Sulfur dioxide (CAS No. 7446-09-5) = TWA 2 ppm, STEL 5 ppm ACGIH/TLV
5.2 mg/m³, 13 mg/m³ ACGIH/TLV

Sodium bisulfite = TWA 5 mg/m³ ACGIH/TLV

Sulfur dioxide (CAS No. 7446-09-5) = TWA 2 ppm, STEL 5 ppm OSHA/PEL
5 mg/m³, 10 mg/m³ OSHA/PEL

We have shown the TLV and PEL for sulfur dioxide because this gas may be generated during combustion or contact with strong acids.

CERCLA/SUPERFUND, 40 CFR 117, 302:

This product contains sodium bisulfite, a Reportable Quantity (RQ) substance and if 12,000 pounds of product are released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D. C. (1-800-424-8802).



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SECTION 14 REGULATORY INFORMATION

(CONTINUED)

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
(TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
This product does not contain ingredients listed in Appendix A and B as an
Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):
Our hazard evaluation has found this product to be hazardous. The product
should be reported under the following EPA hazard categories:

XX Immediate (acute) health hazard
-- Delayed (chronic) health hazard
-- Fire hazard
-- Sudden release of pressure hazard
-- Reactive hazard

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):
This product does not contain ingredients on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA):
The chemical ingredients in this product are on the 8(b) Inventory List
(40 CFR 710).

This product has been certified as KOSHER/PAREVE for year-round use EXCEPT
FOR THE PASSOVER SEASON by the CHICAGO RABBINICAL COUNCIL.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:
Consult Section 11 for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15
(formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):
This product contains the following ingredient covered by the Clean Water Act:

Sodium bisulfite - Section 311

CLEAN AIR ACT, Sec. 111 (40 CFR 60), Sec. 112 (40 CFR 61, 1990 Amendments):
This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:



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SECTION 14 REGULATORY INFORMATION

(CONTINUED)

This product does not contain any chemicals which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS:

This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:

The following ingredient(s) are disclosed for compliance with State Right To Know Laws:

Sodium bisulfite	7631-90-5
Water	7732-18-5

INTERNATIONAL REGULATIONS:

This is a WHMIS controlled product under The House of Commons of Canada Bill C-70 (Class D2B). The product contains the following substance(s), from the Ingredient Disclosure List or has been evaluated based on its toxicological properties, to contain the following hazardous ingredient(s):

Chemical Name	CAS #	% Concentration Range
Sodium bisulfite	7631-90-5	40-70

SECTION 15 ADDITIONAL INFORMATION

None

SECTION 16 USER'S RESPONSIBILITY

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 17 BIBLIOGRAPHY

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SECTION 17 BIBLIOGRAPHY

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CHEMICAL HAZARDS OF THE WORKPLACE, Proctor, N. H., and Hughes, J. P., eds., J. P. Lipincott Company, N.Y., 1981.

DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, Sax, N. Irving, ed., Van Nostrand Reinhold Company, N.Y., 6th edition, 1984.

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PREPARED BY: Ricky A. Stackhouse PhD., Toxicologist

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